REMARKS

Claims 7-10 are currently pending and were rejected under 35 U.S.C. 102(b) as being anticipated by Kao. Claims 1-6 were previously cancelled without prejudice.

Examiner has indicated "that Prior Art shown in [Kao] figure 2 <u>alone</u> teaches all the limitations recited in claim [7]." 12/7/06, Final Office Action (FOA), p. 3. Assignee respectfully traverses and notes that claim 7 recites, among other limitations, "a first Gray code to binary converter for generating the particular address indicated by the read pointer" and "a second Gray code to binary converter for generating the particular address indicated by the write pointer". Kao, Figure 2 does not teach these limitations.

Although Kao, Col. 1, Lines 47-52 notes that:

> To determine how much memory space in the FIFO memory can be accessed, the Gray codes corresponding to the read and write pointers are first converted to sequential counts. A subtraction is then performed on the two sequential counts in order to determine the available space in the FIFO.

the foregoing does not teach "a first Gray code to binary converter <u>for generating the particular address indicated by the read pointer</u>" and "a second Gray code to binary converter <u>for generating the particular address indicated by the write pointer</u>".

In fact, far from the "<u>Gray code to binary converter</u>" "generating the particular address indicated by the read/write pointer", Kao, Figure 2 teaches "One [Gray code counter] is used as a read pointer, and the other [Gray code counter] is used as a write pointer." Col. 1, Lines 46-47. Thus, Kao Figure 2, does not teach all of the limitations of claim 7.

In the August 9, 2006 Office Action (OA) Examiner indicated (OA, at 3) that Kao discloses

> "a read pointer for indicating a particular address in the FIFO [Write Pointer; figure 9];
> a write pointer for indicating another particular address in the FIFO [Write Pointer, figure 3, 304]

2

a first Gray code to binary converter for generating the particular address indicated by the read pointer [figure 9 shows that the output of the Read Pointer is fed to a Gray Code to Sequential Converter to generate the address to access the dual port RAM FIFO; ...

a second Gray code to binary converter for generating the particular address indicated by the write pointer [figure 3 shows that the output of the Write Pointer (304) is fed to a Gray Code to Sequential Converter to generate the address to access the dual port RAM FIFO".

It appears from the Final Office Action as though Examiner maintains this ground of rejection as well. Accordingly, Assignee reiterates the arguments in the November 9, 2006 response.

Assignee notes Kao, "Figure 3 illustrates an asynchronous dual-port FIFO in accordance with a preferred embodiment of the present invention" and "Figure 9 illustrates an asynchronous dual-port FIFO in accordance with an <u>alternative</u> embodiment of the present invention."

Thus, Kao does not teach the claimed (in claim 7) "<u>A</u> circuit ... comprising: ... a read pointer ... a write pointer ... a first Gray code to binary converter ... a second Gray code to binary converter ...". Even if Examiner characterization of Kao is correct, Kao teaches, at Figure 3, teaches "an asynchronous dual-port FIFO" comprising "a write pointer" and "a second Gray code to binary converter ...", and at Figure 9 "an asynchronous dual-port FIFO in accordance with an <u>alternative</u> embodiment of the present invention" comprising "a read pointer" and "a second Gray code to binary converter". However, none of the circuits in Kao, Figure 3 or 9, are "comprising ... a read pointer ... a write pointer ... a first Gray code to binary converter ... a second Gray code to binary converter ...".

In fact, regarding Figure 3, Kao specifically states "The read pointer 305 is implemented by a <u>conventional sequential counter</u>." Kao, Col. 3, Lines 35-36. Regarding Figure 9, "The read pointer is implemented by a Gray code counter and the <u>write pointer is implemented by a sequential counter</u>". Col. 7, Lines 7-9.

Additionally, Examiner has indicated (Office Action at 3) that Kao discloses "a comparator for determining whether the FIFO is empty or full based on a comparison of a Gray code associated with the read pointer and a Gray code associated with the write pointer [figures 3, 7, and 9]."

Although Examiner does not identify with specificity, which structure of Figures 3 and 9 are the claimed comparator, it appears as though Examiner is referring to the "Status Indicator".

Assignee respectfully submits that Kao does not teach "a comparator for determining whether the FIFO is empty or full based on a comparison of a Gray code associated with the read pointer and a Gray code associated with the write pointer". In Kao, Figure 3, "The read pointer 305 is implemented by a conventional sequential counter." Kao, Col. 3, Lines 35-36. Thus, the "Status Indicator" does not determine "whether the FIFO is empty or full based on a comparison of a Gray code associated with the read pointer and a Gray code associated with the write pointer".

As for Figure 7, "Fig. 7 illustrates a status indicator used in the asynchronous dual port FIFO of FIG. 3". As noted above, the "status indicator" in Kao, Figure 3 does not determine "whether the FIFO is empty or full based on a comparison of a Gray code associated with the read pointer and a Gray code associated with the write pointer".

In Kao, Figure 9, "the write pointer is implemented by a conventional sequential counter." Kao, Col. 7, Lines 7-9. Thus, the "Status Indicator" does not determine "whether the FIFO is empty or full based on a comparison of a Gray code associated with the read pointer and a Gray code associated with the write pointer".

Accordingly, for the above reasons, Assignee respectfully traverses the rejection to claim 7 as anticipated by Kao, Figure 2, alone, and Figures 3 and 9, and requests that Examiner withdraw the rejection to claim 7, and dependent claims 8 – 11.

CONCLUSION

Assignee respectfully submits that each of the pending claims are allowable, making the application in a condition for allowance. Examiner is respectfully requested to pass this case to issuance.

The Commissioner is hereby authorized to charge any deficiency in the amount enclosed or any additional fees which may be required under 37 CFR 1.16 or 1.17 to Deposit Account No. 13-0017 in the name of McAndrews, Held & Malloy, Ltd.

RESPECTFULLY SUBMITTED,

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